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Education, poverty and income inequality in the Republic of Croatia*

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Abstract

Contemporary researches on economic inequality and poverty are pointing out that their key causes appear in the field of tax policy, workforce policy, policy of employment and more recently in education and educational quality of population. The authors are therefore examining the level and quality of education of Croatian population as one of the most important terms of poverty. In compliance with findings that submit theoretical and empirical evidence of their connection, they highlight education as the most important influential area of economic and social policy in purpose of long-term downsizing of poverty and economic inequality, as well as reaching the level of development of the most successful CEE and EU countries.

***Key words**: education, poverty, income inequality, economic development*

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1. Introduction

Even though the economic theory was engaged in problems of economic inequality and poverty a long time ago and some developed countries have a hundred-year old tradition of their tracking, in the Republic of Croatia poverty and inequality have been significantly researched only for a couple of years.[4]

Growth indicators of global world disparities at the beginning of XXI Century, then increase of unemployment, inequality and poverty in many EU countries and especially in countries of Central and Eastern Europe, is doubtlessly talking about seriousness of the problem. Cognition of controversiality of real social and economic development in the world, where the number of impoverished is rapidly increasing as well as differences in income distribution, is becoming more realistic and requires concrete action.

In January 2005 UN published the most detailed strategy in struggle against world poverty until now, which is called "The Millennium Project". This project has a package of specific economic measures that will try to halve the number of impoverished in the world until 2015.[5]

The European Council accepted the contents of New social policy (Social Policy Agenda) at meeting in Nice in 2000, which was focused on struggle against poverty and social exclusion. They also accepted the proposition for compilation of National programs of struggle against poverty and social exclusion (National Action Plan against Poverty and Social Exclusion) for the member countries of European Union. Their intention is to bide and adjust social policy of employment on national level and level of EU.

In the Republic of Croatia the Government adopted The Program of struggle against poverty and social exclusion after the World Bank conducted the research in 2002. However, the effects have not been completely evaluated yet.

What measures and activities will be used in struggle against economic inequalities and poverty depends upon numerous factors: economic, social, political… It is important to know causes that are the most important in determining a degree of inequality and poverty in specific country when defining those measures. Identification of key factors presents a prior condition of efficient and long-term reduction of poverty degree and righteous distribution of accomplished income. In another words, this means achievement of social and economic development in compliance with contemporary understanding of development according to which a development of a country is achieved providing three simultaneous processes are accomplished:

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[4] First systematical research was conducted by the World Bank in cooperation with Government of the Republic of Croatia in 2001 and results have been based upon Survey of household consumption in 1998 which was conducted by Central Bureau of Statistics

[5] http://www.un.org/milennium: the strategy was formed after it was found that „Milennial goals" defined in September 2000 by the UN didn't initiate the expected changes in reduction of world poverty.

- economic growth measured by level of gross domestic product per capita,
- reduction of unemployment or growth of employment,
- reduction of income inequalities.

In this paper, which represents a continuance of former research on income inequalities and poverty,[6] the authors examine level and biodiversity of educational quality of population as one of the most important determinants of inequality and poverty in the world as well as in the Republic of Croatia. In compliance with findings, they stress out the importance of education as one of the most important action domain of economic and social policy in terms of long-term reduction of poverty and economic inequalities in our country.

2. The influence of educational quality on income inequalities and poverty

Contemporary research of economic inequalities and poverty are pointing that their key causes appear in the field of tax policy, workforce policy, policy of employment and especially in education and its quality.

It is considered that future tendencies of inequality and poverty progress, with reference to the possibility of their reduction, significantly depend upon downsizing the differences in accessibility to education to all income-related categories of population. The representation of papers dealing with the problem of education and economic inequalities is obvious in recent economic literature. Some of them are interpreting degree of correlation between income of population and its education and have proved that, according to quantitative analysis, distribution of income depends upon education. This helps to actualize and deepen the earlier findings about the correlation between earnings (income) of individual and his educational quality in the year 1964, when Gary Becker and Barry Chiswick specified the costs of investment in human capital as a part of earnings that would be realized providing there had been no such investments. (Becker, G. S., Barry, R. C., 1966). Ten years earlier Jacob Mincer claimed: "If the costs of going to school for extra year are only opportunity costs of student's time and if a proportional increase of earnings caused by extra education is constant during a lifetime, then the progress of earnings will be

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linearly correlated with individual years of education." The fall of that interconnection could be interpreted due to rate of investment refund in education. (Mincer, J., 1974). Numerous authors have researched rates of investment refund in education, especially in higher education (Becker, Hanoch, Matilla, Freeman, McConnell and Brue). McConnell and Brue have calculated rates of investment refunds in higher education in 80-ies, with reference to premium progress on higher education for the period between 1963 and 1986. They have expressed premiums in terms of percentage in weakly earnings of highly- and middle-educated workers. During the course of time, those differences varied depending on offer and search for workforce. The slightest difference was in 1963 when the highly-educated earned weakly 47% more than employees with secondary education, while the biggest difference was in 1986 at amount of 67%. (McConnell, C. R., Brue, S. L., 1992). Krueger and Lindhall have estimated that each additional year of education results in increase of earnings for approximately 10% in the USA, while the rate of investment refund varies during the time and is different in individual countries. (Krueger, A. B., Lindhall, M., 2001).

Analyses and researches conducted in most transitional countries have shown significant increase of educational premium: difference in salaries between college-educated worker and worker with basic education in some countries is more then doubled between 1989 and 1993. A good example is Poland: before transition a college-educated worker earned approximately 35% more than a worker with basic education, while since 1993, this difference has grown to 75%. In Hungary and Poland difference in salaries caused by the educational premium contributes to 11 – 15% of total income inequality of population, in Estonia and Latvia between 7 and 9%, Slovenia close to 20% (Making Transition Work for Everyone, World Bank, 2000). In Croatia, according to latest information (2002), difference in average salary of college-educated worker and lower-skilled workers amounted to 124%, while in 1993 it amounted even to 220%.[7]

It can be said that the goal of more recent research is to point out the influence of education on earnings of employees, to evaluate importance of education as an investment (Carillo, A. Z., 2001), with reference to a higher setting aside of funds for public education which can reduce income inequalities in state, (Sylwester, K., 2002), and consequentially poverty.

On the example of the USA Willen, Hendel and Shapiro are exploring wages reduction among the most educated classes and deepening of economic inequalities as a result of the increased availability of higher education. That is to say, they have concluded that the poor part of population becomes even poorer when it stays at the same educational level, while there is a simultaneous increase of educational level and wages level of the rest of population. (Willen, P., Hendel, I., Shapiro, J., 2004).

[7] According to: World Bank 2001, Croatia: Economic Vulnerability and Welfare Study, Washington, 2001.

The attempts of measuring the influence of family background and capability of an individual on his or her education and his/her salary level are very interesting. Belzil and Hensen have used structural dynamical model to prove that family background, especially educational quality of parents, contribute even with 68% to educational range of children, while in the group of identified influential factors the least pure influence has their capability. At the same time, individual differences in salaries are primarily consequence of their specific capabilities whose contribution is 73%. (Belzil, C., Hansen, J., 2003). Researchers have put a significant effort to prove that righteous distribution of educational possibilities of population in longer time periods has a great influence on fair income distribution by using analysis of longer time periods for bigger number of countries. (De Gregorio, J., Lee, J. W., 2002). More recently the greater intention is given to a problem of influence of life-time education on economic position of an individual. It is proved that life-time education is necessary condition for individual employment, while at the same time the problem of non-existence of positive influence indicators of life-time education on salary that is essential for further research of total economic benefits of a life-time education is pointed out. (Jenkins, A., Vignoles, A., Wolf, A., Galindo-Rueda, F., 2003).

While explaining the causes of great increase of inequality and poverty in European transitional economies (CEE countries), the World Bank is emphasizing the influence of educational premiums that are the result of investments in individual education. Under the poverty line in these countries are located mostly unemployed, poorly educated individuals.[8] When exploring influential factors on income inequalities in transitional economies, A. Kaasa has especially excluded the importance of human resources development in group of demographic factors.

If we analyse the contents of adopted Millennium goals of organisation of UN, we can detect the importance given to the educational increase as one of the most important means in struggle against poverty and reduction of disparities in the world, as well as in downsizing of income inequalities of populations in individual countries. Achievement of those goals is important for making the fundamental education accessible to everyone, among others, as reference to a possibility that all over the world children have a possibility to finish fundamental education until 2015 and to increase literacy rate for population between 15 and 24 years. They also want to achieve a greater educational accessibility for women, while it has been estimated that they are liable to weaker education and lower salaries due to their more poor education.

Education quality has an influence on poverty and income inequalities within individual countries as well on development inequalities between individual countries on global world level. The richest countries of the world have the most educated population, while the poorest have the least educated population. Undeveloped countries are struggling with uprooting illiteracy, while the most developed countries already have between 3 and 1/3 of highly educated population

[8] Taken from: Making Transition Work for Everyone, World Bank, 2000, p. 149-150.

with tendency to increase the number of highly educated individuals in the next ten years to more then 40%. While the undeveloped world countries are struggling against illiteracy, in most developed countries the generational range of tertiary education has come close to or even exceeded 50%. As an example, we can mention that the least developed African countries (Nigeria, Benin, Senegal, Ethiopia) registered illiteracy rate of 75 to 80% in 2001,[9] while the most developed countries of high income (Finland, Norway, The United States) uprooted illiteracy. In those countries the tertiary education includes 70 to 85% of relevant age group.[10] Countries of Middle and Eastern Europe (Estonia, Lithuania, Slovenia, Poland, Czech Republic) had in the same year illiteracy rate from 0,2 to 0,7%, while the tertiary education included approximately 50% of population of relevant age group. The Republic of Croatia has 3% of illiterate population, while in 2001 the tertiary education included only 36% of population of relevant age group.

While the poverty is the state in which mostly uneducated individuals and their families live, consequently we can conclude that poverty is the characteristic of states with uneducated population. Opposite of that, states with educated population achieve a high income per capita, while share of poor population is significantly lower.

Investment in education has an effect of postponed action both for an individual and for the community. Still, investment refund is much faster from an individual aspect than from a social one. Investments in bigger generational range and educational quality will show its operation only when pupils and students enter the world of work. It is necessary to educate in terms of quality generations of students and pupils in order to improve educational structure of total population and its synergetic impact on increase of social prosperity. Important role in achieving that goal belongs to public and not exclusively private investments. We can not achieve long-term economic development without them, so countries that consider their future put them on the top of hierarchy of national development priorities. Countries that succeeded to actualise hastened economic growth and development in the second half of the XX century belonged to higher groups in terms of education or development of human resources according to research conducted in 60-is. (Harbison, F. I., Myers, Ch. A., 1964).

3. Educational quality of Croatian population and its influence on poverty and income inequality

Former research of income inequality and poverty progress in the Republic of Croatia confirms theoretical and empirical findings of their connection to education and educational quality of population. Educational quality of Croatian population is unsatisfying that directly influences on income inequality and poverty.

[9] According to: www.worldbank.org/data

[10] According to: World Development Report 2004, The World Bank, Washington, p. 76-79.

Table 1: Generational range[11] of population in primary, secondary and tertiary education in chosen countries in 2002

– in percent (%)

Country	Primary education	Secondary education	Tertiary Education
Austria	103	99	57
Belgium	105	154	58
Finland	102	126	85
France	105	108	54
Ireland	119	-	47
Italy	101	96	50
Netherlands	108	124	55
Sweden	110	149	70
United Kingdom	101	158	59
Developed EU countries – average	*106*	*127*	*59*
Czech Republic	104	95	30
Poland	100	101	55
Hungary	102	98	40
Slovenia	100	106	61
Slovakia	103	87	30
Romania	99	82	27
Estonia	103	110	59
Ukraine	90	97	57
Republic of Croatia	96	88	36
CEE countries – average	*100*	*96*	*44*
Deviation of Croatia from an average of chosen developed EU countries in percentage	*-9.4*	*-30.7*	*-39*
Deviation of Croatia from average of chosen CEE countries in EU in percentage	*-4*	*-8.3*	*-18.2*

Source: Compilation of authors according to: World Development Indicators 2004, The World Bank, Washington, p. 76-79.

In Republic of Croatia we can observe a smaller generational range of population on every educational level in comparison with average of chosen developed EU countries and chosen CEE countries. Disturbing is the fact that in Croatia admission rate in high-school (as admitted from percentage of relevant age group) was for 8.3% lower then average admission rate in chosen CEE countries in 2002.[12] The situation of tertiary

[11] Generational range represents relationship of all included in education, regardless to age, in contrast to those who according to their age belong to observed educational group (primary, secondary or tertiary education). If the number of those included in education is higher then those who should be included in education according to their age, observed relationship is 1 or more then 10%.

[12] Admission rate in Croatian high-schools amounted only 66% in 2000, in Hungary 87%, Poland 91%, Latvia 74%, Lithuania 89%. Admission rate in high-schools in Latvia amounted 89% in 2002, while in Lithuania it was 92%.

educational range is even worse: in the Republic of Croatia admission rate on institutions of higher education is lower for 39% in comparison with an average of developed countries or for 18% in comparison with an average of chosen CEE countries.

The number of expected years of education of population accounted 12 in Republic of Croatia, 14 to 15 in Poland, Slovenia and Lithuania, 13 in Latvia, 13 in Bulgaria, 14 in Czech Republic, 12 in Romania and 13 to 14 in Hungary according to World Bank data for 2002, while in all EU countries it accounted 15 years. That really means it was expected that Croatian citizens would in future have finished high school, while in most developed CEE countries and EU countries they will have the first university degree, i.e. the first level of tertiary education.

Table 2: Income inequality and poverty in CEE countries

Country	Gini coefficient	Population with less than US$ 2 of daily consumption (in % from total population)
Czech Republic	0.254 (1)	2.0
Hungary	0.244 (2)	7.3
Poland	0.316 (2)	2.0
Slovenia	0.284 (2)	2.0
CEE - 4 average	*0.2745*	*3.33*
Bulgaria	0.319 (4)	21.9
Romania	0.303 (4)	27.5
Russia	0.456 (4)	25.1
Ukraine	0.290 (3)	31.0
Lithuania	0.363 (4)	7.8
Latvia	0.362 (5)	8.3
Estonia	0.304 (4)	5.2
Moldavia	0.406 (2)	38.4
Belarus	0.217 (2)	2.0
CROATIA	*0.290 (2)*	*2.0*
Average - all included countries	*0.320*	*13.0*

Source: Compilation of authors according to World Development Report, World Bank 2003; other data according to authors

Note: (1) year of 1996; (2) year of 1998, (3) year of 1999, (4) year of 2000, (5) year of 2001

We can conclude that Croatian educational quality lags for its developed European environments that will in the long-term slow down adoption and usage of needed knowledge and human skills important for life and work in market conditions.

Education represents the strongest determinant of income inequality because the differences in education of household carrier contribute with 16 to 17% in explanation of total income inequality in the Republic of Croatia. (Nestić, D., 2002).

Income inequality in the Republic of Croatia is higher in comparison with the most successful transitional countries, but poverty degree is relatively low according to criteria of the World Bank.[13]

Although the determination of empowerment rate is connected with numerous methodological problems, according to internationally comparable standards, the rate of total empowerment in Croatia is extremely low. Even in contrast to estimated national level of empowerment that is significantly higher then 2 US$ daily claimed by World Bank and amounts 5,9 US $ daily, the total empowerment in Croatia amounts only 8.4%.

Nevertheless, the poverty in Croatia is long-term defined mostly by education and employment. A high connection between poverty and low level of education has been proved. Children coming from poor families have significantly higher risk for exclusion from educational process. The empowered in Croatia are mostly insufficient educated or they posses only narrowly specialised skills. If they work, they are underpaid, but they are more often unemployed. Almost 80% of empowered are coming from households where the head of the family has utmost finished elementary school.[14] It means that differences in educational premiums which result from investments in education of population in Croatia significantly determine income inequality and poverty as well.

[13] Read about measurement of income inequality in: Nestić, D.: "Economic inequalities in Croatia 1973-1998 - Financial theory and practice", 26, Zagreb, 2002; about determination of empowerment level see in: Šućur, Z.: "Poverty and social transfers in Croatia", http://www.ijf.hr; comparative analysis of income inequalities in Croatia and transitional countries see in: Karaman Aksentijević, N. - Denona Bogović, N.: "Tendencies and Causes of Economic Inequality in the Republic of Croatia and CEE Countries", International Journal Transformations in Business and Economics, vol. 4, No. 1 (7), ISSN 1648-4460, p. 37-54, Lithuania, 2005.

[14] According to: World Bank 2001, Croatia: "Economic Vulnerability and Welfare Study", Washington, 2001

Table 3: Average monthly net salary in kunas per employee in the Republic of Croatia according to expertise in chosen years

		Univ. degree	Assoc. degree	Sec. ed.	Prim. ed.	Highly skilled	Skilled	Semi skilled	Lower skilled	Avg
1996		3,182	2,381	1,974	1,532	2,168	1,79	1,54	1,394	2,043
	Deviation from average (in %)	+55.6	+16.5	-3.3	-25.0	+6.1	-12.4	-24.6	-31.8	0.0
	Deviation from Univ. degree (in %)	0.0	-25.2	-38.0	-51.9	-31.9	-43.7	-51.6	-56.2	-35.8
	Deviation from Second. (in %)	+61.2	+20.6	0.0	-22.4	+9.8	-9.3	-22.0	-29.4	+3.4
	Deviation from Lower skilled (in %)	+128.3	+70.8	+41.6	+9.9	+55.5	+28.4	+10.5	0.0	+46.6
1999		4,968	3,633	2,815	2,177	3,043	2,404	2,115	1,897	2,999
	Deviation from average (in %)	+65.7	+21.1	-6.1	-27.4	+1.5	-19.8	-29.5	-36.7	0.0
	Deviation from Univ. degree (in %)	0.0	-26.9	-43.3	-56,2	-38.7	-51.6	-57.4	-61.8	-39.6
	Deviation from Second. (in %)	+76.5	+29.1	0.0	-22.7	+8.1	-14.6	-24.9	-32.6	+6.5
	Deviation from Lower skilled (in %)	+161.8	+91.5	+48.4	+14.8	+60.4	+26.7	+11.5	0.0	+58.1
2001		5,759	4,27	3,23	2,538	3,673	2,779	2,431	2,174	3,506
	Deviation from average (in %)	+64.3	+21.3	-7.9	-27.6	+4.8	-20.7	-30.7	-38.0	0.0
	Deviation from Univ. degree (in %)	0.0	-25.9	-43.9	-55.9	-36.2	-51.7	-57.8	-62.2	-39.1
	Deviation from Second. (in %)	+78.3	+32.2	0.0	-21.4	+13.7	-13.9	-24.7	-32.7	+8.5
	Deviation from Lower skilled (in %)	+164.9	+96.4	+48.5	+16.7	+68.9	+27.8	+11.8	0.0	+61.3
2002		5,928	4,39	3,357	2,643	3,858	2,904	2,529	2,298	3,659
	Deviation from average (in %)	+62.0	+20.0	-8.2	-27.7	+5.4	-20.6	-30.8	-37.2	0.0
	Deviation from Univ. degree (in %)	0.0	-25.9	-43.4	-55.4	-34.9	-51.0	-57.3	-61.2	-38.2
	Deviation from Second. (in %)	+76.6	+30.8	0.0	-21.3	+14.9	-13.5	-24.6	-31.5	+9.0
	Deviation from Lower skilled (in %)	+158.0	+91.0	+46.0	+15.0	+67.9	+26.4	+10.1	0.0	+59.2
Index of net salary 2002 /1996		186.3	184.3	170	172.5	177.9	162.2	164.2	164.8	179.0
Avg. level of net salary change 1996 - 2002		10.9	10.7	9.2	9.5	10.1	8.3	8.6	8.6	10.2

Source: Compilation of authors according to Statistical Annual Report of Croatia -1998., p. , Statistical Annual Report of Croatia -2001., p. and Statistical Annual Report of Croatia -2004., p. 156. and 158

Highly educated employees in Croatia earned in 1996 (expressed in net salaries) 55% more then average of all employed, 61% more then employed with high-school

education and 128% more then employed with lower expertise. The difference in net salaries in 2002 is getting higher so the highly educated employees earned 62% more then average of all employed, 76% more then employed with high-school education and 158% more then unqualified workers. At the same period average net salary of high expertise grows at rate of 10.9% per year, while positive dispersion from average net salary is still present among workers with high expertise. All other educational groups record negative deviation from average of paid net salaries. We can conclude that due to significant differences in educational premiums, which will presumably increase in future, individuals and families with lower and inadequate education will be especially exposed to risk of poverty.

Education is also the main reason for different risk of poverty among individual Croatian regions: the biggest poverty risk have inhabitants of rural parts of Central and Eastern Croatia, which is mostly attributed to unfavourable educational structure of those regions. Research of relative development of Croatian counties and development of their human resources for 2001 has shown that counties that reached the highest level of life standard had significantly more developed human resources. (Karaman Aksentijević, N. - Ježić, Z., 2002).

Rural regions had the lowest life standard and the most underdeveloped human resources in 2001. Ličko-senjska and Vukovarsko-srijemska Counties are much below the Croatian average. We can also record great differences among counties that are especially stressed in development of human resources. It is disturbing that, from development aspect as well as from positions of income inequality and poverty reproduction, the majority of counties with small percentage of highly educated employees also had significantly below-average number of students per 1000 inhabitants: Krapinsko-zagorska, Virovitičko-podravska, Bjelovarsko-bilogorska, Vukovarsko-srijemska and Ličko-senjska Counties have between 37 and 46% less students per 1000 inhabitants then Croatian average.

Education greatly determines the position of job seekers on the workforce market. In the Republic of Croatia we can talk about the existence of structural discrepancies of demand and supply for work resulting in long-term social exclusion of part of unemployed and finally their worse income position and poverty. The demand for educated workers is the highest in comparison with supply (number of unemployed in that category), while the lowest demand is for workers with lower qualifications.

Table 4: Search and demand for workforce according to expertise in the Republic of Croatia in years 2001– 2003

	2001			2002			2003		
	Number of unemp. persons	Number of emp. persons from Bureau	Number of unemp. per one employee from Bureau	Number of unemp. persons from Bureau	Number of emp. persons from Bureau	Number of unemp. per one employee from Bureau	Number of unemp. persons from Bureau	Number of emp. persons from Bureau	Number of unemp. per one employee from Bureau
Lower skilled	71,120	13,943	5.1	72,589	15,373	4.7	60,707	13,320	4.6
Semi skilled	59,310	16,057	3.7	64,977	18,608	3.5	59,551	17,124	3.5
Skilled, Highly skilled	130,484	61,107	2.1	130,941	66,906	2.0	108,735	57,061	1.9
Second. educ.	92,211	36,822	2.5	94,052	43,159	2.2	78,683	38,976	2.0
Assoc. degree	12,063	7,704	1.6	12,333	8,452	1.5	10,315	7,492	1.4
Univer. degree	15,007	11,767	1.3	18,840	13,068	1.4	11,808	11,238	1.1
TOTAL	380,195	147,400	2.6	389,741	165,566	2.4	329,799	145,211	2.3

Source: Compilation of authors according to: Annual Report of Croatian Bureau of Employment 2002, 2002, p. 96 and Annual Report of Croatian Bureau of Employment for 2003, 2003, p. 96.

We can notice that within the period 2001 – 2003, the number of the unemployed in comparison with one employed person from Bureau of Employment is the lowest for the highly educated (approximately 1.3 persons on one employee) and the highest for the lower educated employees (approximately 4.1 persons). In the structure of the unemployed according to their qualifications, there is 70% of the unemployed with lower level of qualifications, 24% of the unemployed have secondary education, and 6% are those who are highly educated persons.

The waiting period for employment has been significantly prolonged in comparison with pre-transitional period according to data from Croatian Bureau of Employment. In compliance with that 34.2% of the unemployed waited for employment less than three months in 1988, 18.1% in 1999, 13.6% in 2002 and 18.9% in 2003. Opposite to that, 15% of the unemployed waited for employment more than three years in 1988, 19.8% in 1999, 26.5% in 2002 and 29.5% in 2003. Workers with lower qualifications wait for employment much longer that directly causes a long-term unemployment. In category of persons who were waiting for employment longer than three years in 1999, the most represented were unqualified workers with 25.8%. In the structure of the unemployed in 2002, as well as in 2003, the most represented were unqualified workers with 34.3% and 36.8%. [15]

[15] According to: Annual Report of Croatian Bureau of Employment – 2002, 2003, p. 96.

The similar situation is with people who finished vocational secondary schools and who also represent disproportionately large category of the unemployed regarding their workforce representation.

Table 5: Structure of the unemployed according to their period of unemployment from 2001 to 2003 in the Republic of Croatia

– in percent (%)

Duration of unemployment	2001	2002	2003	Index 2002 /2001	Index 2003 /2001	Index 2003 /2002
To 3 months	18.5	13.6	18.9	73.51	102.16	138.97
From 3 to 6 months	13.7	11.6	11.7	84.67	85.40	100.86
From 6 to 9 months	7.4	7.2	6.0	97.30	81.08	83.33
From 9 to 12 months	7.4	8.5	5.2	114.86	70.27	61.17
From 1 to 2 years	19.1	20.7	16.1	108.38	84.29	77.77
From 2 to 3 years	11.1	12.0	12.5	108.11	112.61	104.17
More than 3 years	22.8	26.5	29.5	116.23	129.38	111.32
TOTAL	100.0	100.0	100.0			

Source: Compilation of authors according to: Annual Report of Croatian Bureau of Employment 2002, 2002, p. 20 and Annual Report of Croatian Bureau of Employment 2003, 2003, p. 21.

Considering the length of unemployment period more than one quarter of the unemployed waited for employment longer than three years in period between 2001 and 2003, 18% of unemployed for one to three years and 17% up to three months. The number of unemployed waiting for employment up to three months has been increased for 39% in 2003 in comparison with 2001 or 11,3% for individuals waiting for employment longer then three years.

Inappropriate education is mentioned as one of the key factors of long-term unemployment in Croatia because those individuals in principal neither have enough work experience, nor the necessary knowledge that would ensure their competitiveness on workforce market.

Educational quality and knowledge of an individual have a great influence on his or her opportunity to get empoyed, as well as on attractiveness of his work position.

The research conducted by the World Bank has confirmed that children of the impoverished in Croatia have a greater probability of exclusion from educational process, which means a lower possibility of employment and greater "chance" of remaining in circle of poverty. Research conducted in more developed countries indicates that family characteristics, such as income and education of parents, have a significant influence on educational success. (Barro, J. R. – Jong-Wha, L., 1997) According to research from 1998 conducted by the World Bank in Croatia, the children coming from families categorized as poor, did not attend school or college and only 10% of them attended secondary vocational education. Exceptional differences in connection with accessibility to certain educational levels that are

highly ranked on the workforce market additionally strengthen existing inequalities between impoverished and those who are not. (World Bank 2001, Croatia: "Economic Vulnerability and Welfare Study", Washington 2001)

More recent research in the USA have confirmed theses that investment in education are more economical for individuals of more poorly social status, while the total benefits are significantly higher for those who manage to graduate on prestigious colleges in comparison with youngsters coming from families from higher social ranks. (Krueger, A. B. – Lindhal, M., 2001)

Undoubtedly, in struggle against poverty and inequality the key issue is to increase the level and quality of education among the Croatian population.

4. Conclusion

Economic reforms after the 1990 resulted in increase of inequality and poverty in countries of Central and Eastern Europe. The research in that field indicates that the increase of inequality and poverty, apart from tax policy, workforce policy and employment policy have been primarily influenced by the level and quality of education of the population. Hence, it is considered that future tendencies of inequality and poverty progress and possibility of their reduction significantly depends upon increase of educational accessibility to all income categories of population.

In more recent economic literature we can notice representation of papers that deal with the problem of education and economic inequalities. Those papers try to indicate the influence of education on employee's income and to prove that the increase of funds for public education can reduce income inequalities. Explaining the causes of a great increase of income inequalities and poverty in European transitional economies, The World Bank emphasizes the influence of educational premiums that are result of investments in education of an individual, which is proven by fact that under the poverty line are mostly unemployed and poorly educated person. As can be seen, while the poverty is the state in which mostly live uneducated individuals and their families, the poverty is also a characteristic of states with uneducated population.

Educational investment has a postponed effect both for an individual and for community. Investment returns are faster on individual than social aspect, which means that a significant role in education belongs to both private and public investments. Without them we cannot consider a long-term economic development, so that education becomes the fundamental priority of development.

The quality of education of the Croatian population is not satisfactory which is directly influenced by income inequalities and poverty. In Croatia, we can observe a smaller generational range of population on all educational levels in comparison with average of developed EU and CEE countries. The same situation is with the number

of expected educational years. Should the former trend continue in the future, the citizens of the Republic of Croatia would averagely finish secondary education, while the citizens of the most developed CEE and EU countries would complete the first university degree of tertiary education. From that point of view, we can conclude that educational quality in the Republic of Croatia lags for its developed European environment what causes long-term lagging in its economic development.

While the rate of absolute poverty in Croatia is significantly low, the income inequality is higher in comparison with more successful transitional countries. Nevertheless, the poverty is long-term determined mostly by education and employment, so that almost 80% of the impoverished in Croatia come from households where the head of the family has finished only primary education. That indicates that differences in educational premiums, which are result of educational investment in population, significantly determine income inequality and poverty in Croatia as well. In reference to significant differences in educational premiums, which will only increase in future, individuals and families with lower and inadequate income are mostly exposed to poverty, while the greatest risk of poverty have inhabitants of rural parts of Central and Eastern Croatia that can be explained with inadequate educational structure of those regions.

The demand for workforce compared to the supply is highest among people with higher qualifications and lowest among people with lower qualifications. The waiting period for employment is significantly lengthened compared to the pre-transitional period, so that workers with lower qualifications wait longer for employment which causes a category of long-term unemployment. It is for this reason that education is mentioned as one of the key factors of long-term unemployment because those individuals usually do not have enough work experience or the required knowledge in order to ensure competitiveness on work market. It is considered that education and knowledge of an individual has a great influence on his or her opportunity of getting employment as well as on attractiveness of his work place. Undoubtedly, all the above mentioned factors point out that in struggle against poverty and economic inequalities, the key issue is to increase the level and quality of education among the population of the Republic of Croatia.

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Obrazovanje, siromaštvo i dohodovne nejednakosti u Republici Hrvatskoj

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Sažetak

Suvremena istraživanja ekonomskih nejednakosti i siromaštva naglašavaju da se njihovi ključni uzroci nalaze u području porezne politike, politike radne snage i zapošljavanja, a u novije vrijeme naročito se kao uzroci naglašavaju obrazovanje i obrazovanost stanovništva. Stoga autori istražuju razinu i kvalitetu obrazovanosti stanovništva Republike Hrvatske kao jedne od najvažnijih odrednica siromaštva. U skladu s nalazima, koji podastiru teorijske i empirijske dokaze o njihovoj povezanosti, ukazuju na značaj obrazovanja kao najznačajnijeg područja djelovanja ekonomske i socijalne politike u cilju dugoročnog smanjenja siromaštva i ekonomskih nejednakosti te dostizanja razine razvijenosti najrazvijenijih CEE zemalja i zemalja Europske unije.

Ključne riječi*: obrazovanje, siromaštvo, dohodovne nejednakosti, ekonomski razvoj*

JEL klasifikacija*: D6, O1, I2, I32, P2*

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